

Reference Clock Frequency 1000 Mhz

TABLE 1

Example synthesis of 734.3133739 Mhz, with 12 bit math/delay

Increment value =  $(2^{12} * 1000\text{MHz} / 734.3133739\text{MHz}) - 2^{12}$

Increment Value = 1482

Falling Edge Accumulator Start Value =  $(50\% \text{ of } (1000\text{MHz} / 734.3133739\text{MHz}) * 2^{12}) = 2789$

| Rising Edge |               |                  |  |                             |
|-------------|---------------|------------------|--|-----------------------------|
| Accumulator | Overflow bits | Base Accumulator | Equivalent Delay from Nearest Ref Edge (deg) | Total Effective Delay (deg) |
| 0           | 0             | 0                | 0  | 0                           |
| 1482        | 0             | 1482             | 130.25                                       | 490.25                      |
| 2964        | 0             | 2964             | 260.51                                       | 980.51                      |
| 4446        | 1             | 350              | 30.76  | 1470.76                     |
| 1832        | 0             | 1832             | 161.02                                       | 1961.02                     |
| 3314        | 0             | 3314             | 291.27                                       | 2451.27                     |
| 4796        | 1             | 700              | 61.52  | 2941.52                     |
| 2182        | 0             | 2182             | 191.78                                       | 3431.78                     |
| 3664        | 0             | 3664             | 322.03                                       | 3922.03                     |
| 5146        | 1             | 1050             | 92.29  | 4412.29                     |
| 2532        | 0             | 2532             | 222.54                                       | 4902.54                     |
| 4014        | 0             | 4014             | 352.79                                       | 5392.79                     |
| 5496        | 1             | 1400             | 123.05                                       | 5883.05                     |
| 2882        | 0             | 2882             | 253.3  | 6373.3                      |
| 4364        | 1             | 268              | 23.55  | 6863.55                     |
| 1750        | 0             | 1750             | 153.81                                       | 7353.81                     |
| 3232        | 0             | 3232             | 284.06                                       | 7844.06                     |
| 4714        | 1             | 618              | 54.32  | 8334.32                     |
| 2100        | 0             | 2100             | 184.57                                       | 8824.57                     |
| 3582        | 0             | 3582             | 314.82                                       | 9314.82                     |
| 5064        | 1             | 968              | 85.08  | 9805.08                     |
| 2450        | 0             | 2450             | 215.33                                       | 10295.33                    |
| 3932        | 0             | 3932             | 345.59                                       | 10785.59                    |
| 5414        | 1             | 1318             | 115.84                                       | 11275.84                    |
| 2800        | 0             | 2800             | 246.09                                       | 11766.09                    |
| 4282        | 1             | 186              | 16.35  | 12256.35                    |
| 1668        | 0             | 1668             | 146.6  | 12746.6                     |

| Falling Edge |               |                  |  |                             |
|--------------|---------------|------------------|--|-----------------------------|
| Accumulator  | Overflow bits | Base Accumulator | Equivalent Delay from Nearest Ref Edge (deg) | Total Effective Delay (deg) |
| 2789         | 0             | 2789             | 245.13                                       | 245.13                      |
| 4271         | 1             | 175              | 15.38  | 735.38                      |
| 1657         | 0             | 1657             | 145.63                                       | 1225.63                     |
| 3139         | 0             | 3139             | 275.89                                       | 1715.89                     |
| 4621         | 1             | 525              | 46.14  | 2206.14                     |
| 2007         | 0             | 2007             | 176.4  | 2696.4                      |
| 3489         | 0             | 3489             | 306.65                                       | 3186.65                     |
| 4971         | 1             | 875              | 76.9   | 3676.9                      |
| 2357         | 0             | 2357             | 207.16                                       | 4167.16                     |
| 3839         | 0             | 3839             | 337.41                                       | 4657.41                     |
| 5321         | 1             | 1225             | 107.67                                       | 5147.67                     |
| 2707         | 0             | 2707             | 237.92                                       | 5637.92                     |
| 4189         | 1             | 93               | 8.17   | 6128.17                     |
| 1575         | 0             | 1575             | 138.43                                       | 6618.43                     |
| 3057         | 0             | 3057             | 268.68                                       | 7108.68                     |
| 4539         | 1             | 443              | 38.94  | 7598.94                     |
| 1925         | 0             | 1925             | 169.19                                       | 8089.19                     |
| 3407         | 0             | 3407             | 299.44                                       | 8579.44                     |
| 4889         | 1             | 793              | 69.7   | 9069.7                      |
| 2275         | 0             | 2275             | 199.95                                       | 9559.95                     |
| 3757         | 0             | 3757             | 330.21                                       | 10050.21                    |
| 5239         | 1             | 1143             | 100.46                                       | 10540.46                    |
| 2625         | 0             | 2625             | 230.71                                       | 11030.71                    |
| 4107         | 1             | 11               | 0.97   | 11520.97                    |
| 1493         | 0             | 1493             | 131.22                                       | 12011.22                    |
| 2975         | 0             | 2975             | 261.47                                       | 12501.47                    |
| 4457         | 1             | 361              | 31.73  | 12991.73                    |